

## REMARKS

Instant claims 1-4, 6, and 8-10 stand pending in this Application. Claims 18-19 have been canceled.

### ***Summary Of Personal Interview With The Examiner***

On October 15, 2007, Examiner Sanza McClendon, Applicants' representative, Mr. Andrew Merriam, and Applicants' patent liaison, Dr. Andrew Bunn, conducted a personal interview to further prosecution in the instant application. During the interview, the parties discussed the nature of the invention and reviewed the rejections outstanding on the record in relation to the instant claims. The Applicant wishes to thank the Examiner for extending the courtesy of a personal interview.

### **Double Patenting**

Claims 1-4, 6, 8-10, and 18-19 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of Application Serial No. 10/642,791 (now US 7,179,531) in view of Dersch *et al.* (U.S. 6,492,451). Applicants respectfully traverse this rejection. Herewith, Applicants have filed a Terminal Disclaimer to obviate these rejections

### **Claim Rejections: 35 U.S.C. §102(b)**

Claim 18 is rejected under 35 U.S.C. §102(b) as being anticipated by Ma *et al.* (U.S. 6,247,808), hereafter "Ma".

Applicants have canceled claim 18. The rejection is therefore moot. This rejection should be withdrawn.

### **Claim Rejections: 35 U.S.C. §102(e)**

Claims 18 and 19 are rejected under 35 U.S.C. §102(e) as being anticipated by Rosano *et al.* (U.S. 6,890,983), hereafter "Rosano".

Applicants have canceled claims 18-19. The rejection is therefore moot. This rejection should be withdrawn.

Claims 18 and 19 are rejected under 35 U.S.C. §102(e) as being anticipated by Dersch *et al.* (U.S. 6,492,451), hereafter "Dersch". Applicants respectfully traverse this rejection.

Dersch fails to disclose aqueous emulsion polymerization of phosphorus acid monomer at a pH of less than 2, or any composition having a level of water soluble polymer having second phosphorus acid groups defined by the ratios of equivalents of second phosphorus acid groups to equivalents of first phosphorus acid groups in the range of less than or equal to 1.5, as instantly recited.

Applicants have provided a good faith reproduction of the closest Example (Dispersion D1 on column 12, line 55, to column 13, line 49) of Dersch in which the highest proportion of acidic monomer is expected to polymerize into the disperse phase of the emulsion. Please see "Amended Declaration of Ward T. Brown Pursuant to 37 C.F.R. §1.132", of May 1, 2007. The small discrepancies in solids and pH referred to in the Office Action of July 25, 2007, are insignificant and, in the case of solids, do not affect the relative proportion of acidic monomer in the aqueous phase and, in the case of pH, are within the limits of uncertainty of the equipment used to measure pH addressed in the attached Declaration of Ward Brown Pursuant to 37 C.F.R. §1.132, of May 1, 2007.

Because Dersch has been shown to fail to disclose each and every feature of the rejected claims, Dersch fails to anticipate the claims of the instant application.

In addition, instant claims 18-19 have been canceled. This rejection should be withdrawn.

Claims 1-4, 6, 8-10, and 18-19 are rejected under 35 U.S.C. §102(e) as being anticipated by Edwards *et al.* (U.S. 7,101,921), hereafter "Edwards". Applicants respectfully traverse this rejection.

Edwards fails to disclose polymers prepared by aqueous emulsion polymerization of phosphorus acid monomer at a pH of less than 2, as instantly recited. Further, Edwards fails to disclose compositions having a level of water soluble polymer having second phosphorus acid groups defined by the ratios of equivalents of second phosphorus acid groups to equivalents of first phosphorus acid groups in the range of less than or equal to 1.5, as instantly recited.

Edwards' reference nowhere mentions improved dispersion of colored pigment, as is the focus of the instant invention. On the other hand, the instant invention utilizes an improved method of incorporation of phosphorus-containing monomers into the polymer backbone in order to effect improved dispersion of pigment particles in a coating composition, thereby providing increased color and hiding.

The disclosures of Edwards do not teach the instant invention, and fail to render the invention obvious. The components of the instantly recited invention are not brought together into a single embodiment; and there is no suggestion to do so. Only by impermissibly picking and choosing of a single combination from a variety of disconnected broad disclosures that would create a large multitude of combinations can one re-create the applicants' invention. Among many other monomers, anionic monomers may be used in Edwards, from which one would have to select one of the two phosphorus-containing monomers from the list of 11 (or more) therein (column 4, lines 15-22). Similarly, in order to locate any form of reference to organic colorant particles, as instantly recited, one would need to select "organic colored pigments" from a list of 8 broad classes of pigments; and there are no examples of organic colored pigments in the list of 20 materials specifically identified in Edwards, so one would have to select past the specific teachings (column 9, line 50, to column 10, line 14). Likewise, Edwards contemplates polymerizations performed at pH less than 8 (column 8, lines 46-49). However, to arrive at the instantly recited invention, one would have to select the pH range less than 2, and ignore Edwards' teaching that the preferred range is pH 2-6. Even assuming that the instant claims encompass a pH of polymerization of 2.0-2.1 within their scope, *which they do not*, the resulting overlap with Edwards covers only 0.1 out of a range of 6.0 pH units or 1/60<sup>th</sup> of the pH range in Edwards. Accordingly, the selection of a combination instantly recited would involve selection 1/11 of monomers x 1/8 of pigment particles x 1/60 of the pH range, a choice of one out of approximately 5,280 possibilities. Indeed, the selection of the instantly recited claims in view of Edwards is too remote to be within the level of ordinary skill in the art. At the very least, Edwards cannot anticipate the instant claims.

Applicants have performed very many polymerizations of phosphorus acid monomers and have found that the ratios of equivalents of second phosphorus acid groups to equivalents of first phosphorus acid groups is well above 2. Such has already been demonstrated by the applicants

in addressing Dersch. Multistage polymerizations like that of Edwards are compared in the specification – please see Example 1 and Comparative A; the properties of the resulting colored coatings are compared as Example 2 and Comparative B). Thus, Edwards fails to disclose each and every feature of the rejected claims and Edwards fails to anticipate the claims of the instant application. This rejection should be withdrawn.

**Claim Rejections: 35 U.S.C. §103(a)**

Claims 1-4, 6, 8-10, and 18-19 are rejected under 35 U.S.C. §103(a) as being unpatentable over Edwards *et al.* (U.S. 7,101,921), hereafter “Edwards”. Applicants respectfully traverse this rejection.

The instantly recited claims are not obvious in view of Edwards for the reasons outlined above in discussing the 102(e) rejection with respect to Edwards. Edwards neither discloses nor suggests any invention as instantly recited.

Claims 1-4, 6, 8-10, and 18-19 are rejected under 35 U.S.C. §103(a) as being unpatentable over Brown *et al.* (U.S. 2004/0054063; “Brown”), in view of Dersch *et al.* (U.S. 6,492,451; “Dersch”). Applicants respectfully traverse this rejection.

In view of the Terminal Disclaimer presented above, Applicants respectfully submit that Brown is not available for a 35 U.S.C. §103(a) rejection. This rejection should be withdrawn.

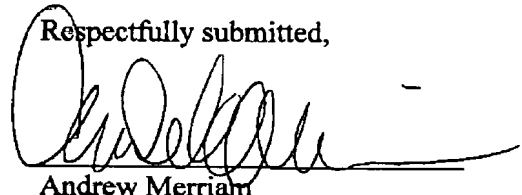
CONCLUSION

Based on the foregoing, the instant claims are believed to be in condition for allowance. Applicants' attorney thanks the Examiner for the time taken to meet with Applicants' representatives on Oct 15<sup>th</sup>, 2007, and also the time taken to review this response. The Applicants request an early and favorable action

Concurrently herewith, Applicants have filed a Terminal Disclaimer to obviate an obviousness-type double patenting rejection.

No fees are believed due. Please charge any applicable fees to Applicants' deposit account no. 18-1850.

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